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SEMICONDUCTOR MECHANICAL SENSOR

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ABSTRACT OF DISCLOSURE

10 A semiconductor mechanical sensor having a new
structure in which a S/N ratio is improved. In the
central portion of a silicon substrate 1, a recess
portion 2 is formed which includes a beam structure. A
weight is formed at the tip of the beam, and in the
bottom surface of the weight in the bottom surface of the
15 recess portion 2 facing the same, an electrode 5 is
formed. An alternating current electric power is applied
between the weight portion 4 and the electrode 5 so that
static electricity is created and the weight is excited
by the static electricity. In an axial direction which
20 is perpendicular to the direction of the excitation of
the weight, an electrode 6 is disposed to face one
surface of the weight and a wall surface of the substrate
which faces the same. A change in a capacitance between
the facing electrodes is electrically detected, and
25 therefore, a change in a physical force acting in the
same direction is detected.

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